dog's neck and ties to the corresponding tab on the opposite pocket. The rear line passes 492
under the animal's belly and is secured to the tab on the opposite side. When dog packs are used to transport fresh meat, they may be lined with an additional piece of canvas to absorb some of the blood. The bottoms of packs are patched with canvas or tanned moosehide, when they become worn. Dog packs are manufactured by women. Dogs can pack up to [462]
forty or fifty pounds, but loads are generally limited to about thirty-five pounds for a stretch of twenty miles. Among the Upper Liard Indians, women and girls were always seen to pack dogs (Pl. 7, A). A Nelson Indian reported that among his people men pack horses as well as dogs. Men everywhere, of course, pack dogs when traveling without families.

When transporting goods by dogs in summer, one or more persons generally start out ahead of the animals. However, the dogs may be guided by chains until about a quarter of a mile from camp. The chorus of eager barking that arises from a camp, when dogs sense one or more of their companions being packed, is evidence of their eagerness to travel. In winter, dogs follow in the rear of people with snowshoes who break the trail. Traveling in winter, especially over crusted snow, often cuts a dog's foot. When this happens, rest stops are always marked by cutting a little brush which is thrown down for the animal to rest on.

The Kaska use both toboggans and sleighs. The toboggan is regarded as best suited for 493
travel in the soft dry snow of winter. Although a sleigh is sometimes used in midwinter, it is recognized as being particularly adapted for traveling on the top of the crusted snow in late winter and early spring.

Toboggans are either purchased from traders or manufactured locally. The description 398
of hewing and bending wood for toboggans has already been presented.a/A The vehicle is 335
normally constructed with three or four pieces of freshly hewed birch pieces, about twelve feet long, six inches wide, and three sixteenths of an inch thick, but the toboggan whose construction was observed and is here reported fell considerably short of these specifications.[4]

After the first two feet of the boards have been bent to produce a curve, they are removed from the bending frame. The cleats, which held the boards together in the bending process, are left in place until all of the crosspieces have been put in position. The exterior sides of the two outside boards of the vehicle are first planed where they have been bent. This planing narrows the front of the vehicle, the reduced nose curtailing the hazard of hitting sticks and stumps along a trail. Such hazards might easily fracture the wood, particularly if the toboggan is traveling rapidly in cold weather. The next step is to substitute crosspieces for the temporary cleats. All of these crosspieces are manufactured of slightly dried birch. On the inner and outer surfaces of the extreme forward portion of the toboggan, two crosspieces are nailed. These are about three inches wide and three quarters of an inch thick (Fig. 3, a). All of the exterior edges of these crosspieces are bevelled with a knife, the bevelled surface being about one eighth of an inch wide. After the pieces have been put in position, the front of the toboggan is trimmed with a saw and planed to insure a smooth and even surface. The second crosspiece is less carefully finished, consisting of a gether the vehicle he worked carefully, but inevitable accidents occurred. Several times the 398 partially dried wood used for crosspieces split when nailed in place. Hans did not go out of 335 his way to rectify these damages. In other words, he revealed no evidence of a drive toward 157 perfection. He was always aware of the limits of the material which he was using but was not well satisfied with the finished product. About half-way through the construction process, Hans expressed the desire for sufficient skins with which to buy a commercially manufactured toboggan during his Christmas visit to Lower Post.*

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[4] The toboggan was made by Hans Donnelly whose narrow doorway has already been referred to. Hans is a small man and may unconsciously pattern objects to his own dimensions.

a/A [category 116, pp. 72-74 -- Analyst]

Toboggans are built by men. When carrying a passenger, this vehicle is guided by 493 ● handlebars. The construction of these was not observed. Their principal feature is a pair of curved wooden handles secured together with crosspieces and lashed to the toboggan. The [462] handlebars are placed about ten inches from the rear of the vehicle, leaving a small space on which a man can stand. The partially enclosed cariole was never seen in the Kaska area.

From three to six dogs are used to draw a toboggan. Dogs are hitched one behind the other, one dog being consistently employed as a leader. The fanwise type of harness is not used and, indeed, would not be adapted to the wooded brushy country of the area. Dog harness is made by women from one and a half inch canvas webbing and includes a collar made of tanned moosehide stuffed with moose hairs and sewn with babiche. The traces are secured to the collar, while a cinch strap, containing two or three small sleigh bells, is fitted around the dog's back to keep the harness in place. The harness of each dog behind the leader is fitted with steel rings which are attached to inch long steel snap fasteners at the end of the traces. These fasteners are also used to harness the last dog to the lashing of the toboggan.

A man generally packs the toboggan but may be assisted by his wife. The heaviest load is placed in the rear of the vehicle. The goods are set on the floor boards, cooking pots and frying pans being placed on top of the main load. The outfit is then covered with a large canvas tarp which is tied down to the toboggan's lashing with several pieces of manila rope. The rope is first secured to the lashing with an overhand knot. Passing across the top of the load it bends under the lashing on the opposite side of the vehicle and is pulled tight before being drawn back to the first side. This process continues to the end of the cordage which is then tied to the lashing with a single overhand knot. A new piece of cordage is taken and the tying continued. Cut or uncut wood is also lashed down in this fashion. Lunch for people traveling is placed in a packsack, which is tied between the handlebars when this apparatus is in use. When children or women ride on the toboggan, they are [481] seated so that their backs rest against the handlebar cross piece. Folded blankets are placed on the floor boards, an eiderdown sleeping robe is spread on top of these and is drawn tightly around the person's body so that it covers the head like a hood. This serves to keep off falling snow. The covering is then lashed to the handlebars and to the side lashing. When the traveler temporarily leaves this shelter, the blankets are immediately closed in order to prevent the heated, damp blankets from freezing. After the toboggan is packed, the man's [492] wife or a younger boy harnesses the dogs to the vehicle.

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* Although Hans' trapping luck was rather poor, the fact that the ethnographer was willing to buy his toboggan enabled him to satisfy his desire. The toboggan, whose manufacture has just been described, is now in the Yale Peabody Museum of Natural History.

493 481 In traveling with a toboggan after a snowfall, it is necessary for someone with snowshoes to precede the dogs and break trail for them as well as to clear windfalls and bulwark the ascents to ridges. Men or women or adolescent children may break trail. If possible, two persons are used to break trail, one following behind the other. The person guiding the toboggan (usually a man) runs behind the vehicle on snowshoes (Pl. 7, B). Such guidance is particularly important when the trail runs downhill, as it is then necessary to restrain the progress of the vehicle. Going uphill assistance must be given to the dogs. This is generally done by the person whose task it is to guide the toboggan running in front with the guide rope and pulling. The rope is not pulled directly in front of the dogs but from a side. On the diagonal ascent of a ridge the guide rope is pulled from the uphill side of the trail in order to prevent the conveyance from slipping. When handlebars are used, dogs are assisted by pushing the toboggan from behind while on a steep hill further help is given by someone else tugging on the dog harness (Pl. 12, A).

A particular danger in traveling across frozen lake and river surfaces is encountered from overflows. These are produced by sinking ice, through which a small amount of water may seep without freezing. Sometimes overflows are impossible to detect in advance, being covered with freshly falling snow. The unfrozen water quickly forms ice on the toboggan boards and, if the unaccustomed friction causes the dogs to halt, may freeze the vehicle to the spot. When a toboggan runs into an overflow and the forming ice begins to hold back the dogs, quick help is given to assist the animals. As soon as the vehicle is on dry snow it is tilted to one side and the ice knocked free with the back of an ax. Remaining ice is scraped free with the ax blade. Sometimes this is not sufficient to remove all the ice. Then the toboggan must be unpacked, a fire made, and the ice melted loose, after which the boards are allowed to dry. Despite the recognized danger of overflows, a suspicious spot of ice is often run over swiftly in order to avoid a lengthy detour. To guard against such danger spots, the person breaking trail often secures a long pole and, well in advance of the vehicle, tests the ice before each step. When not in use the toboggan is turned upside down, on its side, or is leaned against a building with the rear portion resting on the ground. It is rarely placed on a sleigh rack.

493 [177] 398 335 The construction of the Yukon sleigh was not observed. Such vehicles, made from birch, are from seven to nine feet long and are far heavier than toboggans. Their construction was probably learned from white men. The basis of the conveyance consists of two runners, which are several inches longer than the floor boards of the body. The runners are three inches wide and one inch thick. After being bent they are fitted with readymade steel runners that are attached with screws. The floor slats of the sleigh are made of birch wood; four pieces of lumber are required, each four inches wide and about a half inch thick. They are held together by crosspieces, five inches wide and half an inch thick. The crosspieces are placed twenty inches apart, their number depending on the length of the vehicle, and are secured to the floor boards by means of carriage bolts. The floor of the sleigh meets the upturned runners in front but along the rest of the vehicle it is supported about four inches above each runner by stanchions, five inches long, four inches wide, and three inches thick. These blocks are spaced about ten inches apart beginning about four inches from the rear of the sleigh. The body and runners are joined to the stanchions by means of screws. Sleighs are usually provided with handlebars, which are about eighteen inches high and

much longer than those found on toboggans. Instead of fitting on the rear of the conveyance, 493
the handlebars of a sleigh extend about halfway to the front of the vehicle where they are 398
screwed in place. A lashing of babiche runs along each side of the sleigh body and is used 335
for tying down the load. Shafts are employed with the dog harness. These are cut from
green spruce poles, about six feet long and three inches in their greatest diameter. They are [584]
attached to the sleigh by means of babiche. The line passes through a pair of holes drilled
in the most forward stanchion on each side of the sleigh and through corresponding holes
drilled at the lower end of each shaft.

Sleighs are packed the same way as toboggans and their management follows similar 493
principles. When not in use they stand on one side or else are stored on sleigh racks. When
left standing with the runners in the snow, ice forms which must be knocked off before the
vehicle can be used.

Toy sleds, about three or four feet long, are played with by children around the winter 534
settlements.

Foot travel is the commonest form of overland summer travel, although some Nelson 481
Indian children and women ride horses when long distances must be covered. In winter, 492
children from five or six years of age generally walk, while younger children are packed on
the mother's back or else ride in sleighs and toboggans. No particular type of foot-gear is 291
regarded as most suitable for land travel in summer, although moccasins are preferred for
hunting. In winter moccasins are always worn and, under these, snowshoes.

Snowshoes have several functions. By relieving the strain of plodding through deep 292
snow and the problem of slipping on an unevenly packed trail, they reduce fatigue in
winter travel. They also facilitate travel, since a person can go faster on snowshoes than by
plodding through deep snow unaided. Finally these aids are necessary in breaking trail for
dogs, and therefore increase the daily distance which these animals can cover.

Snowshoes are of two types. The first, used for hunting and trapping, generally equals
the wearer's height in length and is about a foot wide. These are used when a man desires
to travel cross country as rapidly as possible, the size of the webbed area preventing him
from sinking too deeply into the snow. While such "big snowshoes" are known, their use
was not observed among the Upper Liard Indians during the period of field work. The
second type is used in breaking trail for dogs and vehicles and for hunting or trapping.
Their length is also apportioned to the height of the wearer, a five foot man generally wearing
snowshoes about three feet long and ten inches wide. Left and right foot snowshoes
are recognized, the greatest curve of the wood being on the outside of the foot. Snowshoe
frames are prepared by men and the panels are almost always filled by women. The details [294]
of lacing and of the foot lashing follow the style which has been traditional since aboriginal
times and will not be described here.

In contrast to what has been said for other areas,[18] the Kaska Indian tends to walk on 481

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[18] A detailed description of putting on, walking, and turning with snowshoes will be found in Osgood, [171]
Ingalik Material Culture (1940), 349-350. The picture he gives there is in complete agreement with what was
noted among the Kaska. Personal use of snowshoes revealed that it takes no more than two or three hours to become used to them in walking. Learning to turn takes longer time, and a number of days are required before their presence on the feet ceases to be consciously noted. So far as their indispensability is concerned, there can be no question.

764 willow, and weeds. Crosses mark most of these graves and there are also a few wire fences.
[351] One grave house may also be seen; apparently it covers a Tahltan burial.

The following record of Lady Metia's funeral was made at Old Man's place, November 18, 1945.

[7-93] A sleigh was used to transport the completed coffin to the death camp, Raymond Donnelly setting himself between the shaft bars to pull the vehicle. When he arrived at the tent frame where the body was waiting, Harry Lang assisted the youth in carrying the box through the narrow entrance, which Mrs. Man later axed away in order to facilitate the coffin's removal. Harry and Raymond placed the body in the box as Mrs. Man, Lady Suza, and Paulette Donnelly watched from the entrance. At this point it was discovered that the sides of the coffin were too low, so that the head of the deceased protruded. Hans was called and dispatched to the carpentering place for additional short pieces of lumber, which could be inserted as wedges to support the lid above the projecting head. Hans found some lumber which Old Man had hewed for skin stretchers and these were axed to fit the width of the coffin and increase the height of the back end of the box. The sides thus left open were covered with the draping that had previously been allowed to overlap the undersurface of the cover.

The coffin was carried out of the tent by Harry and Raymond and placed on a sleigh. Paulette lashed the box to the vehicle, while Raymond began to hitch up five dogs. The men and boys retained the usual emotional imperturbability during this work, but Paulette and her sisters, Anna and Louise, chatted unconcernedly and even laughed at the ethnographer's photographic activities. Meanwhile Harry and Hans had gone into the latter's tent to drink tea and warm up (the temperature was more than twenty degrees below zero, Fahrenheit). When they were through they secured a pick, mattock, and shovel and returned to the carpentering place to prepare a cross out of a red spruce sapling about two inches in diameter. Raymond meanwhile started the sleigh toward the graveyard, riding on the back part of the way. Behind followed a straggling procession including Old Man, his wife, Lady Suza accompanied by Louisa Man, and the ethnographer. When the going became steep and the weight too heavy for the dogs, Raymond suggested that the mourners proceed. He and Louisa, with the ethnographer's assistance, then aided the animals up the steep incline to the burial hill (Plate 12, A). Meanwhile Harry and Hans caught up with the funeral procession and quickly went ahead to prepare the grave.

Early in the morning a large fire had been built on the gravesite in order to thaw the ground for digging. The burned wood was now raked away and the men took turns digging through the still frozen earth with pick and mattock. Raymond, Old Man, and the ethnographer assisted in shoveling the dirt out of the hole. A stick was used to obtain the dimensions of the coffin and to guide the progress of the gravedigging. The work went slowly. In the lower portion of the ground the soil was not yet frozen, and here somewhat faster digging was possible. Nevertheless, darkness overtook the workers before the hole could be excavated to a depth of between four and five feet. Meanwhile the women stood on green brush around a fire which Louisa had kindled thirty feet behind the grave. The evening was intensely cold and overcast, the gathering darkness rapidly obscuring the attractive view which the ridge afforded of the snowcovered Simpson Mountains to the northeast and the Cassiar range to the west.

Two poles, about two inches in diameter, were laid at the upper and lower ends of the burial pit and two similarly placed poles spanned the top of the shaft. The coffin was carried to the grave and rested on the latter poles. The women now moved close to the grave. A quarter inch rope was twice passed under the coffin. With this rope one man lifted the upper end of the

should be kept warm in order to promote rapid healing; this care is especially important in 752
winter. Nosebleed is often permitted to continue without interference, the victim leaning
forward to allow the blood to drop on the ground. Excessive bleeding of this kind may lead
to attempts to staunch the flow of blood with a cloth and sometimes the little finger is tied
with a string to stop the circulation before it reaches the nose. Balsam pitch, when available,
is applied to burns. The treatment of snowblindness consists primarily in avoiding exposure
to strong light. In an emergency, broken bones are set by anyone who feels capable of the
operation and mobility is later aided with a crutch made of a single pole, shoulder height, on
which is nailed a semicircular wooden support for the armpit. One report was obtained
about an old man who, paralyzed on one side, was provided with a small "sleigh" with [493]
wooden wheels. To this a dog was harnessed and thus the man could move around camp.[16]
Frances Lake Indians sometimes treat swellings and pains in the joints with a charcoal cross
drawn over the affected spot. Patent medicine linaments are used for muscle aches and their
application may be accompanied by some massage of the painful area. Frozen members of the
body are thawed with snow, which is gently applied but not rubbed in place. Corns, regarded as the peculiar affliction of men, are cut out at the root with a pocket knife, "Women
can't get it," Old man said, referring to corns. "Maybe because they stay in camp, warm
place." In recent years any serious bodily injury, including toothache, has been referred to [757]
white medical attention when possible.

Kaska society has formulated no clear and explicit theory of disease. As a result several 753
vague but not necessarily conflicting notions of the origin and cause of illness obtain among
different individuals. Thus commenting on his cold, Hans suggested that "wind" must have
brought the "cold sick" from "down there," gesturing down the Liard River. The notion of
communicable diseases being borne in the air or wind is closely allied to the notion of disease transmitted in interpersonal association to which we have already alluded. In referring
to the fact that he and his wife had suffered from dysentery during the winter, Billy Barre
said that people were "packing" the disease around with them "just like wind."

Some illnesses, especially cold, are believed to result from exposure to wet and cold.
Thus Old Man felt he had caught a bad cold during his walk home from Old Kean's place
in the autumn rains. Summer days of strong wind and flying dust usually provoke people
to comment on the dust as being injurious to health. The dust raised by dancing on a
wooden floor also stimulates complaints from people who ascribe sore throats to this irritant.
Another point of view ascribes illness to internal disorders, particularly disorders of the
stomach and liver. Louis Maza, in relating the story of his first son's death, said the child
had been carried on the back of one of the older girls. He suspected that in the packing one
of the baby's ribs had somehow been struck with the result that the liver had become damaged. Death followed in a few days.

Less frequently is the origin of a specific disease ascribed to the spirit of a dead person 754
and rarely to sorcery. Informants were consistent in denying belief in "bad medicine."[17]
While recognizing that such attitudes had formerly occurred in the society, today, ac-

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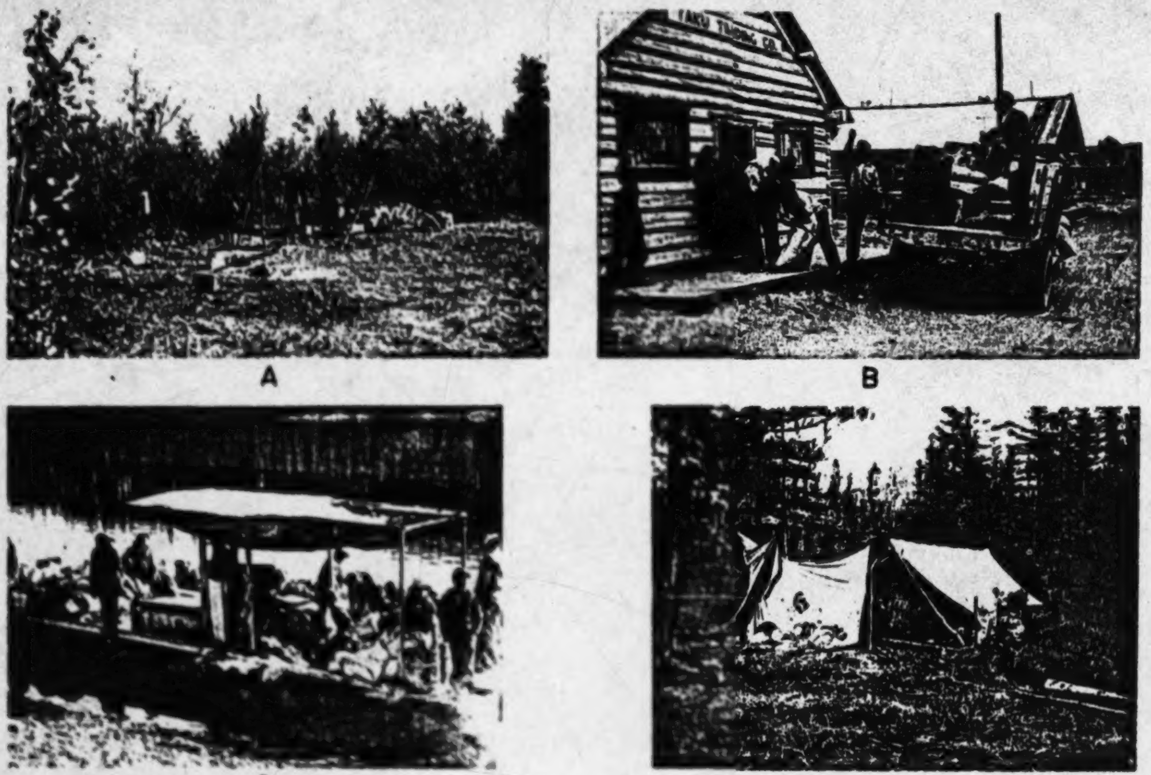
[16] The wheel is not aboriginal in Kaska culture.

[17] Kaska ideas about sorcery may be divided into two types, first, those surviving from aboriginal times and, [177]
second, "witch-fear," which appeared in the post contact society and lasted until about 1915. See Honigmann, *Witch-Fear in Post-Contact Kaska Society* (1947).



ENROUTE TO THE BUSH AND CAMP SCENE

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[END PLATE 9]

231 Salish. Any kind of stout line of leather or rawhide was used. To give greater strength some of these were plaited. No bone toggles were used on the lines, which were simply tied. Dogs were fed on meat and fish and ate all kinds of scraps and refuse around the camp. When their owners had an abundance of food they got plenty to eat and when food was scarce they necessarily received very little. The Tahltan aver that their old breed of dogs could not live at the coast. Many times Tlingit trading parties took dogs home with them, but in all cases these dogs lived but a short time or became very unhealthy. They developed pulmonary troubles and soon died or became mangy. Whites who have taken away to different parts of the coast specimens of the small Tahltan "bear dog" say that in all cases these dogs soon became sick and died.

[224] 492 The Tahltan claim that formerly dogs were used by them for hunting only, and it is only about fifty years ago since they first commenced to pack and haul with dogs.

[177] In fact it seems packing and driving came in about the time of the Cassiar gold rush in 1874, and for this reason, the introduction of these processes is generally credited to the Whites. Some Indians aver that a little packing had been done a few years previous to this time. However this may be, packing and driving generally came in about this date. •[493] Wooden sleds and dog harnesses of the common kinds used by Whites in the North are those in use, and the methods of driving appear to differ in no ways from those generally prevailing in the North.

492 415 In packing dogs' pack-bags are used. Some of those formerly in use were made of leather, but at the present day all are made of different kinds of canvas or tent material. In shape they are like saddle-bags used on horses. Most of them are of a single strip of canvas of the proper length and width, the middle part of which is intended to rest on the dog's back. The ends are doubled up outwards and sewed to the body so as to form a bag on each side of the dog, a sufficient loose end being left on each side to stretch over and cover the mouth of the bags. Sometimes one loose end is longer than the other, the shorter one simply covering the mouth of the bag of which it is an extension whilst the other reaches over the back of the dog and covers both. Sometimes both are of equal length, one loose end being tucked

231 and others over the portages, has kept horses in the
country until the present time. Although Tahltans
492 do nearly all the pack train work and a number of them
have been in constant contact with horses for years,
hardly any of them have become horse owners or attempted the raising of horses. This is probably not
to be wondered at considering the life of the Tahltan.
Long winters, cutting of hay, infeeding interfering
with trapping, soft ground, etc., /militate against
owning horses;/ the country is better for dogs.

482 Previous to the use of dogs for packing and
hauling, goods were transported entirely on the back,
[493] except that in the winter, when snow conditions were
favorable, hand toboggans were used. The latter are
still used when dog sleighs are not available. Camp
materials, food, meat, etc., are still in large measure
transported on the back, and parties may often be met
shifting camp or on the way to hunting and trapping
grounds, all members carrying loads according to their
[492] strength, from aged people to children of ten and twelve
years. Of course all the dogs have packs as well.

482 Loads were carried on the head with tump-lines. Occasionally for sake of change men sometimes carried with straps passing over the chest or shoulders. The common tump-line or pack strap used by the Tahltan consists of a strip of the leg skin of the caribou or moose (generally the former) cut to an even width and dressed in the hair. Some are dressed only a very little. The strip is usually about two feet long by four or five inches in width, the narrower sizes being generally used by men and the wider by women. To each end of the strap is sewed a piece of heavy leather five or six inches in length, of the same width as the strap and with rounded ends. To each end of these is sewn a double string of caribou leather or stout thongs about eighteen or more inches in length. These strings are used for attachment to the lashings of loads or to the carrying loops of pack-bags, etc. The strings are never wound around loads as is so often the case among the plateau tribes and therefore no great length is required. With many pack straps bone stretchers are used to keep the band flat. They are sewn across the inside of the band just above or at the junction of the leather ends by thread or strings passing through holes bored on their ends. Some are simply seized in position /sic/. Most of them are made from the upper leg bones of
531 caribou of grizzly bear which are split and smoothed
482 into a flat shape. Many of these bones were ornamented

482 284 the meat pack and the back, or sometimes the folded skin of the animal. Meat for carrying was also rolled up and lashed in the skin. No skewers were run through the pieces of meat to keep them in position nor were temporary bags made of skins as among the Nitak and Shuswap. /One of the Salishan Ntakyapamuk or "Thompson River Indians?/

482 Skins however were made into temporary toboggans and meat hauled in them on the snow as among the Interior Salish.

493 Skin Toboggans

As already mentioned skin toboggans are still used to some extent for hauling stuff on the snow and before the advent of the wooden dog sled were extensively used for this purpose. They were made of legskins of caribou in the hair, trimmed in even width and sewed together with sinew, the hair /being placed/ all the same way and lengthwise with the toboggan. The bag of /the/ toboggan is closed at the top with a lacing of thong which passes through slits cut in the skin along the borders. The tow line passes through two heavy loops of hide at the head, the skin there being drawn together when in use making the toboggan pointed and easier to drag in the snow. Women generally hauled these toboggans (See National Museum specimen No. 44; also description of Emmons p. 53).

Trade

439 173 According to tradition very long ago there was little or no intertribal trading and the Tahltan group relate the following of pre-trading days. People were few and widely scattered and therefore seldom met each other. Long ago the Tlingit of the ~~Coast were~~ never met. They never came up the Stikine very far and the Tahltan never went down far. There was thus no trading with the Tlingit. At last Tlingit commenced to come up the river and finally met the Tahltan. After this they came often and finally came annually. The time when trading with the Tlingit commenced was long ago, but still not so very long ago. The time is quite indefinite. 439 It seems, however, that the Tlingit have traded with the Tahltan for a long time back. No doubt a great impetus was given to this trade by the arrival of trading vessels among the Tlingit in the beginning of last century and the establishment of trading posts by the Russians. In the quest for furs the Tlingit became in this trade middlemen between the

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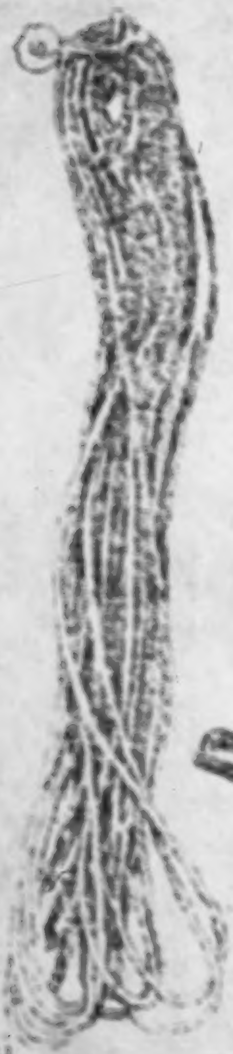

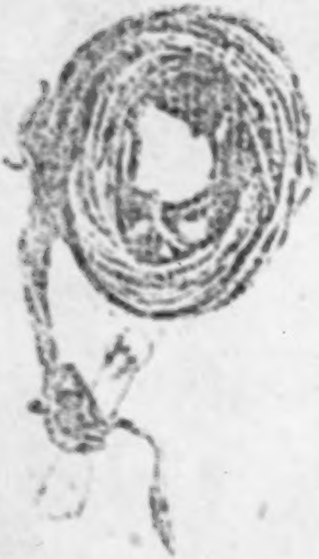

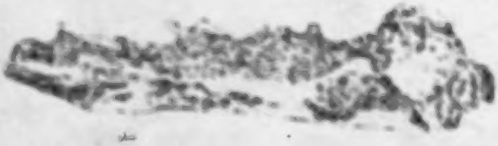

[end plate 18]

6: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12
Frances Lake
Upper Liard

000 formants, who were young men with records of considerable time spent in the Liard Valley. It is likely that the patterns already presented also largely obtained in the Frances Lake area.[37]

TRAVEL AND TRANSPORTATION

484 *Upper Liard Kaska.* Foodgetting among the Indians of the taiga depended thoroughly upon mobility. Although a little travel occurred for other purposes, two main patterns of mobility may be distinguished. *First*, groups of people moved with their belongings to various parts of the tribal territory in search of new food resources to exploit. Such travel took place, for example, in the fall when the population moved to the mountains and again in early winter when they journeyed down to fish lakes. Second, there took place a great deal of "short term" travel, required of men pursuing game or of women visiting fish nets and berry patches. The Indians remained mobile in every season but the techniques of travel differed to a considerable extent between winter and summer. [481 501] With snow on the ground and bodies of water covered with ice the toboggan and snowshoe provided the basic travel aids while in the season of open water travelers relied on the canoe, paddle, and raft.

493 281 Animal skins as well as wood were utilized for toboggans. Beaver skins prepared with the hair served well for traction, the smoothness of the pelt aiding their easy passage over the snow. Three such skins sewn together constituted a good sized vehicle. A number of skins from the hind legs of moose or caribou might also be sewn together with sinew to make a toboggan six feet long and two feet wide. To hold goods securely the rear portions of skin toboggans were stitched "like a baby bag." Prepared by a woman, a skin vehicle would last a winter or even two if stored in a dry place when the snow 493 322 began to melt. A man manufactured undecorated wooden toboggans, tamarack being the preferred material. After splitting the green wood with a wedge he planed the boards with his stone knife. Wood from the exterior section of the tree bent most readily, the bending process being accomplished by moistening the lumber with warm water and then forcing the board back "against a pole."[38] The running boards were sewn to cross

[37] Similar patterns are reported for the Pelly River people by Field, who says, for example, that the Pelly River people moved into "a good game country about the end of August when all game is fat, to put up a cache of dry meat for the winter months." In fall women busied themselves drying groundhog and gopher. The Indians of the Ross and Pelly valleys subsisted primarily on meat and fish. Men "used bows and arrows to hunt with, spears, snares, deadfalls also. They would make long fences when the caribou and sheep came below timberline, sometimes packing poles to make their fences up with on top of the mountains. They would leave spaces big enough for a caribou or sheep to go through in their fences and get snared in them. Whenever a herd was sighted they would try to surround them and drive them through their fences." Cordage for snares came from twisted "sinew or caribou skin raw" and the line was anchored to a movable pole toggle. "Beaver the Indian kills every way, with nets in winter, spears and shoots them . . . and kills them with a club." The gaff stick also served in hunting beaver. (Field, *Unpublished manuscript* [1913].) An Upper Liard informant (8) reported with some distaste that [262] the Ross River Indians deliberately cultivated mold in meat that was later cooked. Such meat proved too strong for the taste of the Liard River people.

[38] The method no doubt resembled that executed by a Frances Lake Indian in 1945. See Honigmann, *Culture and Ethos of Kaska Society* (1949), 60, 73-74; also Pl. 6, a and b.

Upper Liard

pieces with babiche line countersunk in order to avoid wear by friction. At the end of the winter a careful man hung his toboggan in a tree on its upturned ends, the leafy brush protecting the vehicle from rain. 473 322

In loading a toboggan the traveler placed the heaviest load in front, this practice facilitating handling of the vehicle. Women drew toboggans when moving camp but men returning from a kill drew meat on skin or wooden vehicles. With the introduction of dogs large and strong enough for traction, the tandem hitch came into use for traveling through bush. Toboggans were not used to transport people, with the exception of small children. 484 483

The powdery snow of the Cassiar would have hindered long travel during a large part of the year had means not been available for adapting to this boreal forest condition. To break a trail on which the toboggan could move easily without sinking too deeply, as well as for hunting in soft snow, people employed snowshoes. An origin tale explains the introduction of these aids to travel. 481

> In the beginning people couldn't walk as they had no snowshoes. An old man suggested taking advantage of the spreaded end of a spruce branch. Wearing such brush on his feet he went up into the mountains to kill porcupine. The man's name was [illegible], "snowshoe filling father." The people tried the idea but couldn't go far. The old man then hit upon the improved device of a snowshoe frame. He fashioned one with a stone knife and used a beaver tooth chisel to drill large holes in it. A porcupine tooth set in that animal's jawbone served to drill the holes for the fine filling. Then people learned completely how to make snowshoes and the old man became rich making snowshoes for others (6).* 481 539

Aboriginally the Upper Liard Indians manufactured temporary, round and pointed snowshoes. A man caught in an early winter snowfall and lacking his regular snowshoes would prepare a camp and make temporary devices. Bending and lashing a branch of willow or some other easily pliable wood into a rough circle he further provided two crosspieces consisting of short lengths of willow split at either end. The split edges were pulled laterally in the shape of a crude Y and each bar of the Y was then lashed to the willow frame. Of the three panels thus formed only the center one was filled with whatever webs and ends of skin line the maker happened to have in his possession. The frames of such snowshoes were not usually upturned. The wearer discarded temporary snowshoes once he had reached the main camp. The use of two converging willow poles in constructing temporary snowshoes was not known. 322 481

The round or Loucheux type snowshoe is said to have been in early use along the upper Liard River. The native term, however, gives no clue to relative chronology being translated as "snowshoe with pieces overlapping in front." Spruce provided the preferred material for the frames. Although birch was sometimes substituted for spruce, the former wood is said to have picked up and carried too much snow in spring, thereby increasing the weight of the shoe. One informant (C) was much impressed with the use of maple for frames. He had secured a pair of maple snowshoes in Juneau made by a Tlingit Indian and claimed the wood to be perfect for shedding snow. This man, how-

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* We are inclined to see the last part of the story as a late addition to the tale. A young Tahltan woman reported that her people ascribe the origin of the snowshoe to Wolf.

Upper Liard
Peace River

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396
[illegible]

[#23]

[illegible]

[illegible]

481
[illegible]

461
[illegible]

[illegible]

6: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12

Dease River

vehicle. Women as well as men drew the toboggans, a harness for this purpose consisting of one moose-hide line passing around the outside of the [illegible] and around the chest while another cord passed over the top of the head.

Snowshoe types included the round or Loucheux style (said to have been preferable because of its lighter weight) as well as the pointed variety. Function determined the length of these appliances, long shoes being best adapted for a hunter's swift travel in deep snow. Small shoes served well to break trail for a toboggan. In case of emergency a man made temporary snowshoes by bending and lashing a willow pole, which he then filled with heavy babiche line. Children usually employed such crude snowshoes throughout the winter. The customary division of labor appeared, a man constructing the framework while a woman applied the filling. Some snowshoe needles contained a concave depression at one end that served to push the line between closely laid strands of filling.

In any season the order of travel required men to walk ahead of women, a pattern that allowed them to break trail for the women and children. [illegible] constructed of willow and other branches broken in the direction taken. Sometimes men hung moss in the branches of a tree, laid down [illegible] to indicate a course, or cut the trunks of trees with a [illegible]. A single tree felled by fire provided a convenient bridge. Occasionally more complex spans consisting of a number of poles provided safer means for crossing a stream. The tump line facilitated packing and pack [illegible] remained unknown. Baby packs consisted of tanned skin padded with moss. In this container the child faced away from the mother. When old enough to leave the moss bag a youngster rode facing the mother on the latter's back supported by a baby strap that was passed around the outside of the arms and tied in front of the woman's breast. Such belts were often decorated with porcupine-quill embroidery. Such baby carriers were not made.

For communication between traveling groups, the Indians sometimes made use of smoke signals, a single smoke calling attention to a game kill. This custom might be used to invite people to the scene of a kill, young men being able to cover 30 miles by running in a single day. Picture writing or drum language were both lacking.

For water transportation the Dease River people relied on rafts, moose-skin boats (which occasionally reached a length of 30 feet), dugouts, and spruce-bark canoes. A raft contained the necessary number of poles lashed in [illegible] with spruce-bark line. Poling the [illegible] gave the craft greater speed. No [illegible] was often [illegible] forward on a poleraft sail, but people invariably spent nights on shore in the course of traveling. Two varieties of spruce-bark canoes may be distinguished: small vessels serving one or two hunters and larger boats for traveling. The bark was sewn to the framework with spruce root line. Decked canoes, sails, or canoes traveling in pairs could not be recalled for the pre-contact period. Men cut paddles from spruce wood. Crossbar handles were denied for these implements, the informant claiming that the upper end of the shaft contained a [illegible] on which the canoer [illegible] his grip. Such crutch-like handles must have [illegible] the type in use on the Northwest Coast. A ridge was left on the center of the blade, the edges of which might be decorated with [illegible].